

RECOVERY OPERATIONS: TOWING THE LINE

KNOWLEDGE

VOL 6 APRIL 2012

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY



SETTING CONDITIONS FOR SUCCESS

- TEXTING AND DRIVING
- EYE PROTECTION
- FIGHTER MANAGEMENT



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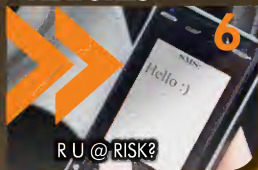


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FIGHTER MANAGEMENT



U.S. ARMY COMBAT READINESS/SAFETY CENTER

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, analyzing and communicating actionable information to assist Leaders, Soldiers, Families and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please email comments to safe.knowledge@conus.army.mil.

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MITIGATING RISK WITH AWARENESS

It's hard to believe another winter has come and gone, yet spring is on our doorstep and Soldiers and Families across our Army are getting outdoors for some much needed fresh air.

Whether it's getting the motorcycle ready for riding season, taking the cover off the boat or planning a vacation far from home, spring and summer offer abundant opportunities for rest and relaxation. That fun can come with a price, however, and Leaders and Soldiers should stay especially aware of the risks inherent to the change of seasons.

During the past three fiscal years, the spring and summer months have continued to be our Army's high-water mark for off-duty fatalities. In fact, closeout numbers from the last six months of fiscal 2011 were nearly 20 percent higher than those from fiscal 2009, a disturbing trend that Leaders and Soldiers at all levels should make every

attempt to counter. But mitigating the risk requires awareness, so I'd like to talk about the issues we saw most frequently last year.

Not surprisingly, the majority of our Army's accidental fatalities were due to privately owned vehicle accidents, with a nearly even split between sedans/other POVs and motorcycles — 32 versus

29, respectively. Taken together, approximately 80 percent of all accidental fatalities from the beginning of April to the end of September occurred on the road, and a great many of that number involved indiscipline. Speeding and failure to wear seat belts or personal protective equipment were the top indiscipline-related factors, and several accidents reportedly involved speeds of 90 mph or greater.

These losses were not simply tragic; they were also pointless. No Soldier ever has a good excuse to not wear a seat belt or travel at speeds approaching triple digits. Likewise, no Leader has a valid reason for not knowing his or her Soldiers are



Remaining **ENGAGED** with both the **SOLDIER** and his or her **PEERS** is the **SINGLE-MOST IMPORTANT** thing any Leader can do.



behaving in such a reckless manner. Someone always knows when a Soldier is taking unnecessary risks; Leaders must get to know their Soldiers and establish a relationship where they feel comfortable talking about their high-risk peers. Safety issues don't belong underground — they should be out in the open and up for discussion, with input on both problems and solutions welcomed from Soldiers at all levels.

The next question is what do you do with high-risk Soldiers once they're identified? Remaining engaged with both the Soldier and his or her peers is the single-most important thing any Leader can do. Behavior change takes

time and patience, and Leaders should involve peers in the process to show the at-risk Soldier he or she is an important and valued member of the team. From there, Leaders should take advantage of remedial driver training programs like Roadrageous, now an official part of the Army Traffic Safety Training Program. Independent studies have shown this training to be effective in reducing collisions by as much as 74 percent, so it's a valuable opportunity for both high-risk Soldiers and anyone wanting to learn defensive driving techniques. Leaders interested in scheduling Roadrageous training should contact their garrison safety office.

We should also remember last spring and summer's fatalities weren't limited to POVs and motorcycles; eight Soldiers drowned between April and September. Activities on the water can be just as risky as driving or riding, and are

made even more so when combined with alcohol use or when Soldiers can't swim or don't know how to properly use a watercraft. Engage with your Soldiers, ask them about their plans and ensure they have the proper training before embarking on any water-related activity. Family, Morale and Recreation facilities offer many fantastic programs geared toward water safety, so ensure your Soldiers take advantage of these close and readily available training opportunities. And like driving sober, ensure your Soldiers understand the risks of mixing alcohol and water activities.

By working together and staying engaged, we can keep accidental fatalities from rising with the temperature these next few months. Stay aware and stay engaged, and most of all, ensure your Soldiers play it safe this spring and summer!«

Army Safe is Army Strong!

WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety

RU @ Risk?

SGT. EBONY DAVIS
1-2 Attack Reconnaissance Battalion
Fort Carson, Colo.

Our son was just a 23-year-old U.S. Marine when he died March 15, 2009, because he was texting while driving. My cellphone rang at 9:22 p.m., and I'll never forget that call.

Our son was barely 10 miles from our house when he went off the west side of the road and hit a culvert, which sent his truck flipping end-over-end. He had apparently been wearing his seat belt but had slipped it off (perhaps his cellphone had fallen on the floor and he was trying to retrieve it?). During the crash, he was ejected and landed 38 feet to the east side of the road before he stopped. His last texted words were, "Yeah T."

Only 24 hours before the accident, my husband had told our son to put his cellphone down,

pointing out it was controlling his life. As it turned out, it did just that — it took his life. Now his little girl has to grow up without her daddy, our daughter without her brother and us without our son. Every night I go to his room, turn on the light, smell his jacket, touch his hats and tell him "goodnight" and that I love him. It has been three years since that terrible evening, but the ache never leaves your heart — not when it was your son.

So what is more important than paying attention while you're driving? What distraction is

worth throwing away your life?

The National Highway Traffic Safety Administration has defined three categories of distracted driving: visual (taking your eyes off the road), manual (taking your hands off the wheel) and cognitive (taking your mind off what you are doing). In recent years, a severe increase in motor vehicle accidents and fatalities has been caused by driving while texting.

NHTSA defines distracted driving as any activity that could divert a person's attention from the primary task of driving. All

distractions endanger driver, passenger and bystander safety. These types of distractions include:

- Texting
- Using a cellphone or smartphone
- Eating and drinking
- Talking to passengers
- Grooming
- Reading, including maps
- Using a navigation system
- Watching a video
- Adjusting a radio, CD player or MP3 player

But, because text messaging requires visual, manual and cognitive attention from the driver, it is by far the most alarming distraction.

We've all been guilty of driving distracted at some point in our lives. Although you may have been fortunate to never have been liable for an accident or ticketed for driving distracted, it's time to take the issue seriously. According to NHTSA, texting drivers are 23 times more likely to have an accident than drivers paying proper attention behind the wheel. The dangers caused by distracted driving have led to new laws being enacted to protect motorists. Thirty-five states, the District of Columbia and Guam ban text messaging for all drivers. Twelve of these laws were enacted in 2010 alone. Nine states, the District of Columbia and the Virgin Islands prohibit all drivers from using handheld cellphones while driving.

The push for stricter anti-distracted driving laws is a key topic for parents, lobbying groups, physicians and even companies that produce cellphones. That's not too difficult to understand when you consider the statistics collected during 2009 by NHTSA on this problem. For example, distracted driving was a reported factor in 16 percent of all fatal and 20 percent of all injury collisions. Drivers using handheld devices were four times more likely to get into injury crashes. Sending or receiving a text message takes a driver's eyes from the road for an average of 4.6 seconds. At 55 mph, that distance is equivalent to a football field. Also, headset cellphone use is not substantially safer than handheld devices. Simply put, distracted is distracted. In fact, a study by Carnegie Mellon University found driving while using a cellphone reduces the amount of brain activity associated with driving by 37 percent.

Still, there is more than statistics involved. For our Family and others who have lost a member to a distracted driving accident, the reality of the cost is much more personal. I can't bring back my son, but maybe, if you read this story and take the message seriously, you won't have to bury someone you love. In the deadly moment it takes to text, a whole lifetime of love and opportunities can be lost. No text message is worth that. <<

LEARN FROM TRAGEDY



THE 10 WORST DAYS



Go to <https://safety.army.mil>
and learn about the dangers
of texting while driving.

Preserve Your Sight to Fight

TRI-SERVICE VISION CONSERVATION AND READINESS PROGRAM STAFF
U.S. Army Public Health Command
Aberdeen Proving Ground, Md.

It's spring — the birds are chirping and flowers blooming. Everywhere you look, people are out exercising, playing sports and, unfortunately, getting injured. April has been designated as Sports Eye Safety Month to remind us to use our eye protection whenever the potential for an eye injury exists — and not just during the duty day. That includes participating in sports and doing other activities around the home.

Everyone has a story about the misjudged fly ball or the finger in the eye during a basketball game. The stories go on and on and usually start with someone doing something stupid. This particular story begins there as well.

One day, upon arriving at the racquetball court, I realized I had forgotten my eye protection. The person I was playing was not that good and I had never been hit in the eye before, so I decided to play anyway. Shortly thereafter,

I hit a lob and waited for the return, which seemed to take too long. Sure enough, as I turned around, the ball hit me square in the eye! I was, indeed, stupid.

The good news is I wasn't hit very hard. I'm one of those



DID YOU KNOW?

The U.S. Army Public Health Command offers postcard-sized Authorized Protective Eyewear List reference cards and other information regarding eye safety. Visit <https://usaphcapps.amedd.army.mil/hioshoppingcart/> to see all products offered.



fortunate people who get to end their story with, "I was lucky." A racquetball to the eye can easily cause permanent damage, but I only had a sore eye for a few days. I also wised up and stopped playing immediately after I was hit.

While combat soldiering has currently replaced sports as the second-leading cause of eye injuries among Soldiers, only behind other types of occupational injuries, the impact from sports activities is still significant. The average eye

injury results in 5.8 days lost from duty at an average cost of \$16,540, according to the U.S. Army Public Health Command. In the U.S., more than 13 percent of eye injuries are sports related, with more than 40,000 occurring each year. Basketball, baseball, softball and racket sports are the leading causes of sports-related eye injuries. If you think about it, that means emergency rooms in this country treat a sports-related eye injury every 13 minutes. These injuries cost \$175 to \$200 million a year, according to the American Optometric Association. Fortunately, 90 percent of these injuries are preventable if people wear protective eyewear. However, conventional eyeglasses do not meet the requirements of protective eyewear and are expensive to replace when broken. Why risk your fashion statement to a softball making a bad bounce? The ASTM International, formerly known as the American Society for Testing and Materials, is an organization that provides guidelines to govern the manufacture and ensure the highest quality of eye protection for specific sports and activities. Whenever possible, it's strongly recommended you use ASTM-approved eye protection that is designed for your particular sport.

The Army also has a comprehensive and very effective program for preventing battlefield injuries — your Military Combat Eye Protection. Your MCEP meets the standards for most sports and, in some areas, it surpasses them. They meet the military ballistic eyewear

standards, which are more stringent than those to stop a flying elbow while going up for a rebound. In fact, the only sports they are not approved for are racket sports and paintball, which have their own protective eyewear requirements. In most cases, you choose the ones you wear because they are comfortable and reasonably stylish, so take them to the court or field. Don't leave them at work; use them at home and while playing whenever there is a potential risk and you do not have any ASTM-approved eyewear available.

You know the old saying — "You only get one set of eyes, so protect them"? Almost one-third of Soldiers returning from combat stated that their MCEPs had prevented them from getting an eye injury. Always remember that an eye injury occurring during a softball game can be just as devastating as one happening in theater. So, when in doubt, wear your protective eyewear in the field, at home and during sports. And don't forget your children. Eye injuries are the leading cause of blindness in children.

For those age 11 to 14, most eye injuries occur while playing sports, with baseball the leading cause for those under 14 and basketball for those 15 to 24. If you teach them early, they will always remember.

Protective eyewear will not only keep you in the game, it will also keep your eyes ready for maintaining your quality of life. Do it for yourself and your Family. Remember — Preserve Your Sight to Fight! <<



Towing the

CHIEF WARRANT OFFICER 4 MARC ASSUMPCAQ
Ground Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Conducting recovery operations on a disabled or mired vehicle may be an urgent mission to accomplish. However, Leaders and Soldiers should be cognizant that removing equipment or vehicles from the battlefield or training areas is an inherently dangerous task. During this type of operation, the application of composite risk management from the start of the planning process through the execution phase is critical to mission success.

Since their inception, Army vehicles and equipment have always needed maintenance support. If repairs are not possible, then a recovery or tow is usually required. Maintainers usually work to return inoperable or immobile vehicles and assets to users as soon as possible in an effort to sustain unit readiness. However, there is more to recovery and towing than just hitching up and taking off down the road.

Once connected to

a piece of equipment or another vehicle, the recovery vehicle will require careful driving. The overall handling of the vehicle becomes different and operators and maintainers need to consider provisions for braking, accelerating and the terrain they may encounter while driving. Whether towing a Mine Resistant Ambush Protected vehicle, High Mobility Multipurpose Wheeled Vehicle or M1 Abrams tank, the weight of the towed vehicle becomes



Line

an important factor when it comes to braking. The heavier the towed vehicle, the greater the distance becomes for the operator to stop it safely.

It's imperative when Soldiers are retrieving damaged equipment or towing a disabled vehicle that Leaders ensure only trained personnel conduct these dangerous tasks. Soldiers authorized to perform recovery missions must be experienced on winching, lifting and towing

and follow all guidelines set forth in Field Manual 4-30.31, Recovery and Battle Damage Assessment and Repair. Additionally, they should heed all safety warnings listed in the technical manuals for the equipment involved. Vehicle and equipment recovery operations are successful only when Soldiers follow the proper procedures and safety precautions.

Remember, maintaining awareness of the risks associated with recovery

operations will help prevent injury to personnel and damage to equipment. As in most driving situations, exposure to certain hazards is inevitable; therefore, Soldiers need to complete a risk assessment before entering or attempting to recover or tow equipment. Soldiers assigned to perform these missions must be knowledgeable on the mechanical functions of the equipment they are recovering, including the use of specialized basic-

issue items and recovery operations in a tactical environment.

Important safety points to remember when conducting recovery and towing operations of a disabled vehicle or piece of equipment include:

- Proper procedures listed in FM 4-30.31 must be followed and extreme caution used to prevent further damage to equipment and injury of personnel.



MRAP RECOVERY VEHICLE (MRV)

CHARACTERISTICS/SPECIFICATIONS

NOTE: INFORMATION TAKEN DIRECTLY FROM THE MAXPRO MRAP RECOVERY VEHICLE (MRV) OPNET HANDOUT.

Diesel Engine

375 HP, MaxForce 10, inline six-cylinder

Transmission

Allison 3200SP, five-speed, automatic

Transfer Case

Meritor two-speed

Base Chassis

7400

Wheel Base

262 in (665 cm)

Drive Line Configuration

6 x 6

Operational Length

409 in (1036 cm)

Operational Width

102 in (260 cm)

Operational Height

119 in (297 cm)

Minimum Ground Clearance

Center of Vehicle: 14 in (36 cm)

Differential: 10 in (25 cm)

Maximum Speed

(MRV W/O Towed Load)

65 mph (105 km/h) on primary hard paved roads.

Minimum Turning Diameter

94 ft (29 m) Right and Left

Turns (Curb-to-Curb)

Maximum Side Slope

30%

Fuel Tank Capacity

57 Gallons

24-Volt Electrical and Cranking System

24-Volt alternator runs the vehicle while the engine operates, charging

the four 12-volt batteries

Communication Systems

Compatible with current communication systems

Tow Points

Front

Air Brakes

Front Disk, Rear Drum

equipped with ABS

Gauges and Indicators

For the Driver

Windows

Transparent Armor

Curb Weight

58,500 lb (26,535 kg)

Gross Vehicle Weight (GVW)

65,000 lb (29,484 kg)

Gross Vehicle Weight Rating (GVWR)

90,500 lb (41,050 kg)

Front Axle Weight Rating

(GAWR)

25,500 lb (11,567 kg)

Rear Axle Weight Rating

(Tandem) (GAWR)

65,000 lb (29,484 kg)

Boom Winch Wire Rope

200 ft of 3/4-inch diameter, 6 x 37

Independent Wire Rope Core (IWRC)

Drag Winch Wire Rope

200 ft of 7/8-inch diameter, 6 x 26

Independent Wire Rope Core (IWRC)

Twin Boom Recovery Winches

Planetary, two-speed, 25,000 lb

(11,340 kg) rating on first layer

at low speed with fail safe brake.

Maximum capacity on fifth layer

at low speed is 13,200 lb (5,987

kg) with fail safe brake.

Drag Winch

Planetary, two-speed, with 50,000

lb (22,680 kg) rating on first

layer, at low speed with fail safe

brake. Maximum capacity on fifth

layer at low speed is 27,200 lb

(12,338 kg) with fail safe brake.

Underlift

35,000 lb (15,876 kg) underlift

capacity at fully retracted. Underlift

rated to approximately 17,000 lb

(7,711 kg) at fully retracted based

upon GVW loading conditions and

rear axle capacity (per SAE-J2512).

Main Boom

Hydraulically Actuated

Lifting Capacity

60,000 lb (27,216 kg) fully

retracted with the boom raised to

30 degrees (per SAE-J2512)

Maximum Boom Length

The boom extension cylinder has

stroke of 130 inches. When at zero

boom angle, the boom has a 152

inch clear reach from the tailgate

Maximum Angle

60°

Maximum Hook Height

354 inches [29.5 ft (9.0 m)] from girth

of hook to ground. 395 inches [32.9 ft

(10.0 m)] from top of sheave to ground.

Boom Rotation

190° CW and CCW (from

stowed position)

Armor Protection System

Mine Protection and Blast of the Hull.

Roof protection from overhead

airburst and side protection against

fragmentation and blast.

Floor

V-shaped belly deflects and

absorbs blast-waves and shrapnel

from IEDs and land mines.

Door Steps

Driver and Passenger-Side

for Crew Members

Seats

Energy Absorbing Seats

for Blast Protection

Life Support System (LSS)

Provides ventilation and

climate control.

The HVAC / LSS regulates fresh and

re-circulated air within the cabin

and provides protection from outside

extreme hot or cold temperatures.

Fire Suppression System (FSS)

Protects personnel from fire.

The cab is equipped with

water-mist fire suppression to

protect personnel from fire.

Only the cab and engine systems

are automatic; all of the systems

may be operated manually in

the event of a malfunction.

Run Flat Tires

Runs at 30 mph (48 km/h) on hard

surfaces after complete loss of

air pressure in any two tires.



- Personnel must stand clear of wire rope under tension and be on the opposite angle of pull. The minimum safe distance is twice the length of the payed-out cable.
- Ensure a trained wheeled vehicle recovery specialist (additional skill identifier H8) is part of the recovery team.
- Do not exceed 25 mph on the highway and 15 mph off road when towing a single vehicle.
- Drivers need to understand that stopping distances increase greatly when the towed vehicle has malfunctioning brakes.
- If the brakes of the disabled vehicle are inoperable, do not flat tow the disabled vehicle. Call for wrecker support.
- When moving or towing a vehicle with inoperable brakes, using a wrecker, use extreme caution and reduce speed accordingly.
- Be aware of local terrain, weather and other conditions that may require speed reduction.
- Move towed loads at slow speed and avoid sharp turns. Proceed slowly in turns at approximately 5 to 10 mph to prevent skidding.
- A tow bar should be the first choice before using chains, ropes or cables.
- When using a tow bar, also connect a chain between the two vehicles for safety in case the bar breaks or becomes disconnected.
- Connect cables, chains or ropes,

DID YOU KNOW?

ALARACT Message 450-2011, MRAP Recovery Vehicle New Equipment Training (NET) RRAD and H8 Requirements for Wheeled Systems, clarifies pre-deployment requirements for H8 wheeled recovery operators and establishes requirements for deploying unit H8 certified recovery vehicle operators to complete MRV NET training at Red River Army Depot. Also, Field Manual 4-30.31, Recovery and Battle Damage Assessment and Repair, focuses on the components necessary for conducting

equipment recovery and towing during wartime operations and during military operations other than war. To access this ALARACT message, Field Manual 4-30.31 and additional information related to equipment safety operations, check out the Driver's Training Toolbox at <https://safety.army.mil/drivertrainingtoolbox/>. Having a strong, solid foundation on the requirements for conducting vehicle and equipment recovery will enable personnel and equipment to be safely postured.

- if used, to the pintle of the prime mover and to the lifting shackles of the towed vehicle.
- Do not put hands near the pintle hook when aligning it with the lunette eye hook.
 - In cities or heavy traffic, tie the front lifting shackles of the towed vehicle tightly to the rear lifting shackles of the prime mover and connect the air brake lines.
 - Do not move a recovery or towing vehicle without the assistance of ground guide. Ground guides must be visible to operators at all times.
 - Never stand between two vehicles when the prime mover is backing

- up to the disabled vehicle; serious injury or death may result.
- Ensure that all personnel are clear of the vehicle before removing wheel chocks and before starting the towing.
 - Personnel must not occupy the vehicle during recovery operations. Failure to comply may result in serious injury or death to personnel.
 - All wheels remaining on the ground of the towed vehicle should be serviceable; this will increase system stability and reduce the risk of further damage. <<



GOT QUESTIONS ON THE PMP?

STEVE KURTIAK
Driving Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The recent change to the Army Traffic Safety Training Program went into effect in fiscal 2012 and has created many questions about the new Progressive Motorcycle Program. The U.S. Army Combat Readiness/Safety Center's Driving Directorate would like to provide answers to some of the most common questions we have received and explain the reasons for the change.

The Army released All Army Activities Message 381/2011 to explain the changes to the ATSTP motorcycle and driver's training courses effective Oct. 1, 2011, and the reasoning behind those changes. The PMP consists of the Motorcycle Safety Foundation's *Basic RiderCourse*, *Experienced RiderCourse*, *Military Sportbike RiderCourse*, *Motorcycle Refresher Training* and *Motorcycle Sustainment Training*. These courses are listed in Chapter 11-7 of the Oct. 4, 2011, Rapid Action Revision to Army Regulation 385-10, The Army Safety Program, and are intended to instill a lifelong learning process and periodically refresh perishable motorcycle riding skills.

The BRC is a one-time requirement for all Soldiers prior to operating a street-licensable motorcycle. While the BRC is the course the Army is most familiar with, there are two other courses that also meet the requirement: Idaho Star Basic I and Team Oregon's Basic Rider Training Course. Idaho Star and Team Oregon are state-

approved curricula and provide an alternative to MSF courses, which are not available in those states. Course completion cards issued by Idaho Star or Team Oregon meet the Army requirement for basic motorcycle training, as does the respective state course for experienced and advanced training.

The ERC, also known as the Basic *RiderCourse* 2, is required for cruiser, touring and standard-type motorcycles. This course could be completed 60 days after the completion of the BRC,

but riders have up to 12 months to complete this requirement. Sport bike riders must complete the MSRC under the same time constraints as the ERC, and this course also applies to riders of sport-touring motorcycles.

Soldiers returning from a deployment lasting longer than 180 days must complete MRT. This training reacquaints the rider with his or her motorcycle and ensures he or she can ride safely by performing basic maneuvers. It also allows the trainer to review the

DID YOU KNOW?

The MSF-USA has chosen to rename some of their courses. Eventually, the Army courses will likely transition to the new titles used by the MSF. The BRC does not change; however, the ERC is now the BRC 2. The reason for this change was that while the BRC/ERC were always intended to be taught in conjunction with each other, in many cases they weren't. The MSRC was developed by the Army and Navy to address accident

trends. The course garnered so much attention that the MSF released the MSRC to the public titled as the *Advanced Rider Course-Sport Bike Techniques* and took it a step further by training cruiser riders as well as sport bike riders. The course is now re-titled as the *Advanced Rider's Course*. Rider training in the United States is progressing and becoming more behaviorally oriented. Look forward to better things to come in military rider training.

Soldier's previously completed motorcycle training while ensuring proper licensing, insurance and personal protective gear are in order and the motorcycle is safe to operate.

The final requirement of the PMP is MST. Soldiers are required to complete this training every three years based on the type of motorcycle owned and operated. For cruiser, standard and touring riders, retaking the ERC is required, while sport bike and sport-touring riders must enroll in another MSRC. Contact your installation safety office for more information

on course availability.

Should riders choose to seek more advanced training outside the Army requirement, they have the option to take an Army-approved advanced-level course at no expense to the government. Formal training such as the BRC, ERC or MSRC is often required as a prerequisite to a track day. When the two courses are combined, they create an advanced level of understanding. A list of advanced-level courses meeting Army criteria is located on the USACR/Safety Center website, <https://safety.army.mil>.

Riding a motorcycle requires a great deal of attention from the rider. Many riders (myself included) develop some bad habits over the years. The intent of the PMP is to periodically bring riders back to ensure their riding skills stay sharp and provide them the tools to make wise risk decisions on the road. This is especially important because we're now seeing a rise in rider indiscipline, primarily excessive speed. Curbing this trend lies solely with us — we must police our own. If peer counseling has no effect, then leadership must be involved. The

SPRING FEVER

EARNEST EAKINS AND STEVE KURTIAK
Driving Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

The days are getting longer and warmer, and the urge to throw your leg over the saddle and fire up your motorcycle is almost too much to bear. But before you bring your bike back to life, there are a few things you must do to get ready for the riding season.

First, listen to your MOM — and by that, we mean your motorcycle owner's manual. If you put your bike in hibernation according to MOM's instructions, simply follow the book to get your scotch back on the road. Pull off the cover, fill the gas tank, change the oil and check the tires for correct pressures and

signs of dry rot. Remove any plugs you installed to keep the critters out of your exhaust, carburetor and air filter intake, and then connect the battery following your MOM's procedures. Pretty easy, right? However, if you just parked your bike in the corner of your garage and didn't connect the battery to a trickle

charger, you might need a jump to get the engine fired up. Remember, always listen to MOM!

A thorough inspection comes next. Between your MOM and the standard T-CLOCS inspection (for the complete checklist, visit www.msf-usa.org/downloads/t-clocsinpectionchecklist.pdf), you should be covered. Remember, any item that fails inspection must be addressed before you hit the great outdoors.

Your bike is just one part of the equation — now it's time to check your roadworthiness!

Try on your personal protective equipment to ensure it still fits and is in serviceable condition. Any extra pounds you put on during the holidays could mean a trip to the bike shop to buy a new jacket or leather chaps.

Also remember your skills might be a little rusty after a few months off two wheels. Forget about making a long trip to Daytona Beach; instead, ease back into shape by practicing the drills outlined in the Motorcycle Safety Foundation's "Riding Tips" handbook (a free downloadable

old phrase says "somebody knows," and that somebody may be you. If it is, you are not doing your buddy a favor by turning a blind eye to their indiscipline. What you are doing is providing the accident investigation team with another person to interview when disaster happens.

Total force sustainment is critical to our nation's defense, and every Soldier has a duty to remain mission ready. Senseless losses due to indiscipline impact unit readiness and the Army's ability to protect our nation and our freedoms. The PMP and other training programs provide lifelong learning opportunities that reinforce safe behaviors and enforce standards, keeping Soldiers safe and ready for the fight.◀

copy is located at www.msf-usa.org/downloads/Riding_Tips.pdf. If it's been more than a few months since your last ride, you'll probably need a refresher course to satisfy the Army's new motorcycle training requirements. Progressive and refresher training courses are now offered at installations across the Army, so contact your local safety office to schedule a time.

Once you hit the road, stay alert to problems like cracks or potholes that might have developed over the winter. Soldiers stationed in colder climates should be very familiar with the unexpected jarring and rattling that comes with a new pothole and leaves you wondering if you bent your rims. Finally, check to

see if your installation has a Motorcycle Mentorship Program. The MMP is a great way to meet people who share the same passion for riding while enjoying group rides and activities. If your installation doesn't have an MMP, contact your safety office or visit the MMP website at <https://safety.army.mil/mmp/> for information on starting a local chapter and a listing of riding associations in your area.

Whether you're a hardcore or fair-weather rider, machine, mind and body must be firing on all cylinders to ensure a safe and enjoyable riding season. Warm weather will come and go, so enjoy it while it's here. Live to ride, and ride safe! ◀



Army Safety Net allows members to quickly exchange safety knowledge. This exchange of knowledge is accomplished through sharing ideas, experiences, lessons learned and best practices. This enables Leaders at all echelons to make better-informed risk management decisions.

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AQUA SMARTS

MEGAN CONN
U.S. Army Corps of Engineers – Fort Worth District
Fort Worth, Texas

I was finishing a long day of lake patrol when I heard a voice over the radio say, "There has been a report of potential drowning." Immediately, my body went numb. All I could think was, "Please let it not be true." I've spent four years as a park ranger for the U.S. Army Corps of Engineers and, unfortunately, seen the same scenario replayed repeatedly — lives lost from both carelessness around the water and lack of education concerning water safety.



According to the Centers for Disease Control and Prevention, drowning is one of the leading causes of unintentional deaths in the United States. It's estimated that 10 people die each day as a result of drowning. Sadly, a large portion of those victims are would-be rescuers. Before attempting to rescue someone, always keep in mind Reach, Throw, Row and Don't Go.

- **Reach.** If someone near you is drowning, first try reaching out to him or her with something near you such as a pool toy, branch, fishing pole or anything sturdy. Remember not to lean too far over and keep your feet firmly planted where you are standing to prevent yourself from falling in and also becoming a victim.
- **Throw.** If the person is too far out to reach, throw something to them. Make sure you throw something that floats (e.g., an ice chest, life preserver,

throw cushion, ring buoy, etc.). If possible, it is best to tie the object to something secure to pull in the victim.

- **Row.** If reaching and throwing are not feasible and you have access to a boat, you can row to the victim.
- **Don't Go.** Unless you are a trained professional in water rescue (e.g., a trained lifeguard), never go in after a victim. A drowning person will try to climb on top of the rescuer, forcing them under the water in an effort to stabilize themselves and get air.

There are a few rules everyone should remember when swimming or boating. First, never swim alone. We aren't invincible, and you never know what will happen. Nobody plans to drown, and it only takes seconds. A drowning person doesn't make a lot of noise; try gasping for air and screaming and you'll see it doesn't work very well.



Second, know your limits. It only takes enough water to cover a person's nose and mouth for them to drown. So many times we try to be the "cool guy" and push or exceed our capabilities. I have seen too many bodies pulled from the water as a direct result of pushing limits and taking unnecessary risks.

The most important thing any of us can remember is to wear a personal flotation device. I have never seen a drowning victim that was wearing a PFD. There are many types of PFDs available for water-based activities. Choosing not to wear one should never be an option. The difference between choosing to use a PFD and going without could be your life. Nobody is waterproof, so always wear your PFD!

Following simple rules and using good judgment around water will save your life and possibly the lives of others. Don't end up drying out in the morgue. <<



DID YOU KNOW?

The U.S. Army Combat Readiness/Safety Center has created an interactive, web-based product designed to increase water safety awareness and to reduce the incidence of water-related deaths and injuries. The Water Safety site presents safety-related content to users through links, videos and entertaining and informative challenges. Check it out today by visiting <https://safety.army.mil/SafetyCity/>. Challenge your friends, beat the high score and show off your skills by competing in our water safety challenges.





COL. JOSEPH E. JACKSON
U.S. Army Aeromedical Activity
Fort Rucker, Ala.

Practice Like You're

Here we go again — another heat article. I'll bet if this were a "Jeopardy" category, you'd wager the whole pot. "Heat injury for \$500, Alex!" What can I tell you that you don't already know? Drink more water. Avoid exertion during the hottest part of the day. Gradually acclimatize yourself. Eat your vegetables. Floss. OK, you get the point.

What is hot, anyway? I guess it depends on your point of view. What my teenage daughter considers hot, I consider criminal. What a guy from Michigan considers hot, an Alabamian considers sweater weather. And compared to July in the Middle East, a sweltering summer day in the Deep South would seem like a spring morning. Obviously, hot is relative, so here's the point: Heat can kill, and it can adversely affect your mental performance long before becoming deadly. Soldiers ill-prepared for the

heat tend to perform more poorly, and today's Army is no place for poor performance — especially in the cockpit. You need to do everything you can to protect yourself.

Mental Performance

Have you ever noticed how hard it is to stay awake in an afternoon class when the room is hot, the instructor is boring and you've just had lunch? Part of the problem is the boring instructor; but he was also boring this morning and you

stayed awake! Another issue is eating lunch. All that blood flow is going to your gut to digest that super-sized value meal. And another factor is what we call the circadian trough, which is the time of day when everyone's sleepy. Yaaaaawn! But the hot, stuffy room is a big piece of the puzzle. We just don't perform as well mentally when we're in a hot environment. It's no wonder so much of the world takes a siesta on hot, nonproductive afternoons. Many of us don't have that luxury; we must perform complex tasks in that greenhouse otherwise known as a cockpit.

The upper limit of heat exposure for unimpaired mental performance is about 85 F wet bulb globe temperature for an individual working two hours or longer. (A WBGT of 85 F is a relatively modest heat threat). This means that even with appropriate work/rest cycles and proper hydration, Soldiers

your mental performance to lapse. Leaders must consider these factors when planning operations in hot conditions. As much as it is possible, train in conditions similar to those you will have to operate in. Practice like you're going to play!

Vigilance

Vigilance, like keen eyesight and devastating good looks, are requisite skills for an aviator (well, they used to be — I think they have recently given out a few "good looks" waivers). Commentary aside, flying is arguably a bit more technically demanding than driving an automobile, requiring the operator to be constantly alert to the surroundings, displays and his crew. Vigilance can be adversely affected by heat, which can be catastrophic. Fortunately, flying's inherent stimulation usually overcomes the monotony that sometimes afflicts the operators

Going to Play

in hot environments will still suffer mental performance degradation that could ultimately affect the mission.

Continuous, repetitive, boring tasks tend to be affected most by degraded mental performance. I can still remember dozing off during flight school while flying straight and level on a summer afternoon under the hood. With the hazards that exist from the man, machine and environment interface, operating an aircraft (or a wheeled vehicle for that matter) isn't the best time for

of more mundane vehicles. The margin of error requires constant vigilance, and the decrements brought about by heat must be mitigated. In addition, many other military activities require Soldiers to be watchful and alert for extended periods of time. Performing sentry duty, surveillance, fireguard, monitoring instruments and driving a Mine Resistant Ambush Protected vehicle all require the individual to be vigilant.

Temperatures higher than 85 F with 63 percent relative humidity





adversely affect Soldiers' vigilance, even those well-acclimatized to the heat. Add an Air Warrior ensemble, some body armor and an electric hat — that equals hot! It is important commanders recognize this limitation and take necessary steps to ensure their Soldiers get adequate breaks from extended duties. An extra set of eyes will also help mitigate the adverse effects of heat. Don't set up your Soldiers for failure!

Changes in Sleep Behavior

Sleep, like food and water, is necessary for health. Humans can go for short periods of time without sleep, but eventually a sleep debt will build up and must be paid. A restful night's sleep lets the brain restore itself, thereby allowing the Soldier to perform at his maximum ability. That is the crux of the fighter management program that all aviation units employ. Everyone reading this article probably realizes that sleeping in a hot environment adversely affects their sleep. Soldiers who acclimatize to the physical effects of heat stress can increase their ability to perform physically. Do you remember the summer football practices, and how much tougher

you were once the season started?

Sleep patterns, however, don't improve over time in a hot environment because sleep quality and effectiveness are reduced at high temperatures. In fact, studies have shown that heat is more disruptive to sleep than noise. In hot environments, you don't wake up as rested as you should, and your performance suffers as a consequence. Leaders must do everything in their power to provide a cool, protected environment for their Soldiers. When that's not possible, Leaders should plan for possible lapses in performance due to fatigue and mental exhaustion. The unit's risk assessment should also reflect the increased hazard of fatigue on aviator performance.

Conclusion

There you have it. Heat cramps, heat exhaustion and heat stroke have been described in this and other publications in the past, but the adverse effects on cognitive abilities aren't often discussed. Living and working in a hot environment has a significant impact on sleep patterns, work ability and cognitive function. Simply put, you have trouble sleeping and paying attention, and you aren't as smart as you usually are. We've all seen those zombies in the tactical operations center who aren't getting the sleep they need. The Army needs every Soldier every day, so take care of your body. After all, where else are you going to live?«

“ Sleep **PATTERNS**, however, **DON'T** improve over time in a **HOT** environment **BECAUSE** sleep quality and **EFFECTIVENESS** are **REDUCED** at **HIGH** temperatures. In fact, studies have shown that **HEAT** is more **DISRUPTIVE** to sleep than noise. ”

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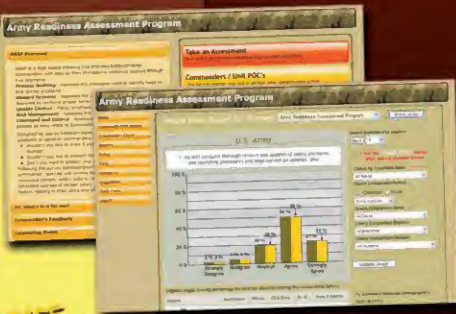
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ARMY SAFE IS ARMY STRONG

Editor's note: Two pilots assigned to the 160th SOAR (Airborne) received the Broken Wing Award Dec. 12, 2011. Chief Warrant Officer 3 Stephen D. Love and Chief Warrant Officer 3 Bryan P. Young were presented the award from the U.S. Army Combat Readiness/Safety Center for their skill, judgment and technique during an in-flight emergency. The Broken Wing Award recognizes aircrew members who demonstrate a high degree of professional skill while recovering from an in-flight failure or malfunction requiring an emergency landing. Love and Young were able to safely bring down their MH-47 Chinook after experiencing a complete hydraulic failure as a result of enemy fire.



SETTING CONDITIONS FOR SUCCESS

CHIEF WARRANT OFFICER 3 (PROMOTABLE) STEPHEN D. LOVE
Bravo Company, 2nd Battalion,
160th Special Operations Aviation Regiment (Airborne)
Fort Campbell, Ky.

On Sept. 9, 2010, we received the call to conduct combat operations in the northeastern mountainous areas of Afghanistan. Over the previous 10 nights, we had conducted operations throughout Afghanistan, so the call for action was not completely unexpected. However, we never expected this night to end the way it did.

We were the lead MH-47G in a flight of three. My co-pilot, Chief Warrant Officer 3 Bryan Young, and I had been flying off and on together for many years and continuously for the last 30 days on this particular rotation. The rest of the pilots in the flight were familiar and comfortable with each other, which made for excellent crew coordination in each aircraft.

We departed our airfield under the cover of darkness with zero illumination.

Both Chalks 1 and 2 had about 20 Special Operations Forces personnel on board, putting the aircraft gross weight at 44,500 pounds, while Chalk 3 was carrying a 10-man initial reaction force and a six-man combat search and rescue force. The 20-minute flight would take us to the helicopter landing zone, which was south of our forward staging base in the mountains.

At 10 minutes out, we received updates regarding the enemy position



SS

and our particular HLZs. Only Chalks 1 and 2 were infilling tonight, so I directed Chalk 3 to enter into a holding pattern should any contingencies develop.

Seven minutes had gone by and all seemed normal until we received intelligence updates indicating we had one enemy combatant moving away from the primary target area. This is not an abnormal occurrence, but it requires effective coordinated communication with the lead cockpit for command and control. The ground force commander, air mission commander and I all communicated with each other, ensuring information was conveyed throughout the battle space. Since the enemy combatant did not come out of the primary target building and was moving away from the two infil HLZs, the ground commander and I ultimately saw no reason to deviate from the primary plan.

While all of this communication

was going on, Bryan was waiting patiently to ask me one simple question, "Did you touch the flight controls?" Around the same time, we had enemy movement and Bryan had felt an abnormal vibration in the flight control system. It had only lasted a second and felt as if the pilot not on the controls had accidentally bumped them. I responded to him that I had not, yet we both knew it was possible I did. While in a blacked-out cockpit and under night vision goggles, I attempted to spot the HLZ, communicating over the radio and bending forward to enter mission data into the aircraft's avionics suite. I could have easily bumped the controls while doing this, so we went back to focusing on the mission.

The infil went as planned. The HLZs for the flight were long, thin spurs that made up the foothills of the 14,000-foot mountain range and flowed into the valley floor, creating deep ravines as they continued to the river to the north. After infil, we began to egress on the planned route and took enemy fire from the target area as we cleared the dust cloud. This caused us to deviate from our planned route and continue parallel to the mountain range. The evasive maneuver put us low and fast, flying 150 feet above ground level at 120 knots.

Once again, I heard Bryan ask, "Steve, did you hit the flight controls?" over the internal communications system. This time I was sure I hadn't and announced, "Left seat inside," ensuring Bryan and the four crewmembers in the back picked up my scan outside for airspace avoidance. Using a small


finger light, I began to look around the flight controls to make certain nothing was interfering with them. I didn't see any problems, so I took over the flight controls from Bryan and asked him to do the same on his side of the cockpit. At first, the flight controls felt normal, and then I felt what Bryan had been asking about.

In less than a second, the aircraft cyclic violently shook left and right about an inch. This happened so fast that the aircraft's integrated hydraulic/mechanical controls didn't have time to take the inputs from the cyclic and input them into the rotors. Also, the thrust of the aircraft pulsed up and down, but not as violently.

We were still evading enemy fire, flying about 150 feet AGL at 100 knots. I began maneuvering away from the ridge paralleling us on our right. As I turned, the flight controls hit a stop. I had about an inch of play in the pitch, roll and thrust axis of the aircraft. I immediately rolled level and attempted to set up for a landing, asking Bryan to get back on the flight controls with me. As he did, he understood how dire our situation was becoming.

About the same time, the aircraft hydraulics froze. We were in about 5-degree nose-high attitude descending at 100 feet-per-minute. The only problem was there was no place to land. Beneath us were 150-foot deep ravines with bottoms too narrow to fit a Chinook. I left Bryan on the controls as I began the emergency procedure for a dual hydraulic flight control failure.

We had not received any warnings or cautions on our instrumentation



“GOOD CREW COORDINATION was an important part to the **SUCCESSFUL OUTCOME** of the emergency procedure. However, **BATTLE ROSTERING** played just as **LARGE OF A ROLE.**”

nor did the crewmembers in the back have any indications on their maintenance panel identifying a hydraulic failure. I recalled the aircraft operator's manual stating, "If both hydraulic systems fail, flight controls cannot be moved." I immediately concluded we had a dual flight control hydraulic failure. Although I completed the emergency procedures, the flight controls remained locked.

I returned the controls to Bryan, hoping he might be able to regain some level of control, but that proved futile. The aircraft was in its final attitude and nothing Bryan or I did was going to change that. We continued to pull and push the cyclic with both hands in an attempt to maneuver the aircraft to a suitable landing area. The crewmembers in the back began to call out possible landing sites, not knowing it was impossible for us to slow the aircraft to maneuver to them.

The deep ravines began to turn into rolling hills, all too steep to attempt a roll-on landing. Then at the two o'clock position, Bryan noticed an opening in the hills that led to a dry riverbed. He announced this to me and we attempted to maneuver the aircraft, but, yet again, the cyclic would not move.

Our minds raced and then I realized the only control axis we had not attempted was the yaw axis. This is done by adjusting the flight

controls that are mechanically linked to the Chinook's pedals. I pushed the right pedal to maneuver the aircraft to the two o'clock position, but the pedal would not move. I tried again, this time pushing on the right pedal with both feet as I braced my back against the aircraft seat and used the cyclic for better leverage. Bryan was still attempting to manipulate the other flight controls as the aircraft's attitude began to change, also changing the aircraft's aerodynamic state. The riverbed came into the 12 o'clock position as the hill we were heading for passed out the left-hand side. Once I released the pressure on the pedal, the aircraft continued forward. We were now at 30 feet AGL and 50 knots and still descending.

The aircraft touched down in the riverbed at 45 knots with a 5-degree nose-high attitude. As the aft wheels touched, both Bryan and I pushed down on the thrust as hard as we could in an attempt to change the dynamics of the rotor system and keep the aircraft on the ground. The aft wheels dug into the loose sand, burying them up to the aircraft frame. We rolled for about 75 feet before the aircraft brutally stopped, throwing us forward. The whole event, from the controls freezing to the aircraft coming to rest, lasted between 45 and 60 seconds.

Not knowing whether enemy fire had anything to do with the hydraulic failure, I quickly conducted

an emergency engine shutdown and we began egress procedures. The exact distance from the enemy was unknown to us. After ensuring none of the crew was hurt, we began to establish a 360-degree security of the area. I made contact with our other aircraft using my survival radio and, within minutes, the initial reaction force and combat search and rescue teams were on the ground to assist. Thirty minutes later, our internal downed aircraft recovery team launched from our airfield and was on site for recovery.

We discovered later that four times the allowable amount of water had gotten into the flight control hydraulic fluid system. Water has a lower boiling point than hydraulic fluid and, at some point during the flight, the water vaporized, causing the hydraulic system to cavitate.

Good crew coordination was an important part to the successful outcome of the emergency procedure. However, battle rostering played just as large a role. Bryan and I have had years of aircrew coordination training and understand how important this is in the Chinook community, especially with a crew of six. The fact remains if that was our first flight together, the outcome may have been different. The benefit of battle rostering crews (for short durations) allowed for more effective crew coordination.◀

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Restoring that Classic Bike

You've scoured eBay, read all the classified ads, looked at Craigslist and finally found that classic motorcycle you've wanted since you were 17 but couldn't afford. You were even lucky enough to find one that just needed the old gas drained from the tank, new gas poured in and the engine started. Do you just get on it and ride? No, you don't!

CHIEF WARRANT OFFICER 5 THOMAS L. BOWIE
Joint Forces Headquarters
Arkansas Army National Guard
Little Rock, Ark.

There are several things that you should consider when putting a vintage motorcycle back on the road. First, if the tires are old, you will need to replace them. They may appear serviceable, maybe even look new — but those aged tires are definitely not roadworthy. Rubber deteriorates while in storage, and dry rot and weather take their toll. The older tire technology is also a factor to consider. Newer-technology tires provide better handling and road-holding capabilities. If you're determined to maintain your bike's vintage appearance, there are online vendors who can provide you with original-style tires.

The next item on the list is brakes. You really want to be able to stop that beautiful old bike when the time comes. The brakes on older machines don't have the stopping capability of modern motorcycle brakes. Even if your prize motorcycle has disc brakes, there may be issues with the operation of the brake system.

Check the brake system for rust in the fluid reservoir and make sure the hoses have

not deteriorated and the connecting fittings are secure and not leaking. Examine the disc for rust and the brake pads for thickness and sticking. Replace any unserviceable parts, making sure you put everything back together correctly.

Machines with drum brakes require even more attention. It's important to check the shoes for sufficient lining thickness, deterioration and security of the liner mounting to the shoe. Also check the brake drum for glazing and whether it is out-of-round. A new wheel hub may be the order of the day to resolve this problem. Some motorcycles have hydraulically operated drum brakes, so you should check those components the same way you would check a disc brake system. Other vintage motorcycles have mechanically operated drum brakes, so you need to check the condition of the hand levers and brake pedals as well as the rods and cables. Replace any of those parts that are worn or frayed.

Now you've got new tires and a brake system that works — at least as well as the older braking system ever worked — let's talk about lighting. Older British bikes had very poor lighting systems consisting of not much more than a flashlight bulb and a reflector assembly. And British bikes weren't the only ones with shortcomings when it came to lights. The good news is there are many new halogen and LED replacement systems available today that will fit directly into your vintage bike's headlight housing. Don't forget about your taillight, brake light and turn signals — if your classic machine has them. There are LED conversions that will make motorists behind you take notice when you step on the brake pedal.

Make sure you also inspect the frame for broken or rusted welds. It could be a bad day for you should the frame separate when you're going down the road. Rust or paint can often hide the condition of the chassis. Also check the kickstand to make sure it is properly mounted and maintained. Check the return spring to make sure the stand doesn't drift down in the middle of a ride, a situation that could lead to disaster.

There are many other items that can be updated to make your vintage motorcycle both safe and dependable. These are the areas I consider the most important, not only to function but also to safety. Spend some time, effort and money in these areas and you can safely enjoy your newfound treasure. ◀



SHELTER FROM

GEORGE WYATT
Installation Safety Office
Fort Campbell, Ky





THE STORM

It seems we barely get through one severe weather season when another comes along. That's happening for us now in middle Tennessee and southern Kentucky, as the threat of severe winter weather is replaced with the risk of severe spring weather. Historically, our most severe weather threats come in the form of thunderstorms, tornadoes and floods during March, April and May as the jet stream retreats north and warmer air falls in behind it.

One doesn't have to go back very far to see severe weather events in the Fort Campbell area have changed the lives of citizens and the landscape forever. We experience severe thunderstorms resulting in varying levels of injury and property damage every year. The major threats during these episodes are straight-line wind, lightning strikes and flash flooding.

Residents of Clarksville will never forget the five-minute event that occurred from 4:15 to 4:20 a.m., Jan. 22, 1999, when an F3 tornado tore a swath of destruction 4.3 miles long and 880 yards wide through downtown. This storm caught everyone by surprise because it actually occurred outside the typical spring severe weather season. It came six weeks earlier than anyone would expect for this area.

More recently, on May 1 and 2, 2010, a super-moist weather system settled over Clarksville, dumping about 14 inches of rain. Flash flooding was almost immediate. Water drainage continued for days, resulting in the Cumberland River cresting at more than 16 feet above flood stage level. Many streets, homes and businesses in Clarksville and the surrounding area were flooded, resulting in injuries to citizens, vehicle accidents and major property damage.

Adverse weather can occur nationwide, so what can we do to protect ourselves? The answer is be prepared for variable weather emergency scenarios, have an emergency action plan, stay aware of the situation and conditions as they change around you and react (or huddle

in place) as necessary.

A number of federal, state and local agencies work to monitor meteorological activity and alert you when hazardous weather is on its way. Communities and installations use a number of ways to get weather alerts out; local radio and television stations are used in addition to weather radios. Alerting agencies can send voice and digital messages to computers, cellphones or smartphones and other devices.

When receiving alerts, it's important to know the difference between a WATCH and WARNING. When a watch associated with a weather phenomenon such as a severe thunderstorm is issued, it means severe thunderstorm development is possible for the area described in the alert.



People in the alert area should be on heightened readiness in the event a warning follows. A severe thunderstorm warning indicates severe thunderstorm activity is already occurring in the area. It is important that people take precautions to protect against extremely low visibility due to heavy rain, dangerous lightning strikes, large hail and damaging straight-line wind and high-velocity debris.

When weather observers determine an area is subject to potential tornado development, they issue a tornado watch. During a tornado watch, it is necessary to assume a heightened state of awareness of the situation, monitor weather updates and be prepared to respond to deteriorating conditions should a tornado warning be issued. A tornado warning means tornado activity has been sighted in the area.

A flood or flash flood watch issued for a particular area indicates the conditions are favorable for flooding. When it has been raining hard in an area for several hours or steadily for several days, the potential for flooding is a real threat. People in flood watch areas should be familiar with flood patterns, monitor the situation and be prepared to react

logically in the event a warning is issued. A flood warning indicates flooding is occurring in the area or will occur soon. In a flood situation, a warning may be accompanied by an order to evacuate.

Storm systems may be observed making their way across vast areas or states and may be relatively unchanging and give plenty of warning of their arrival. In other circumstances, they may develop rapidly and much closer with little or no warning. It is important to understand the general, but wide-ranging, characteristics of storm systems and develop an action plan for your workplace and home and a driving or recreation contingency so everyone knows what to do before the storm shows up on your doorstep. Here are some tips to help keep you and your loved ones safe during adverse weather:

Severe Thunderstorms

When a severe thunderstorm watch is issued, begin monitoring the situation via whatever media is available. Keep in mind that if you are monitoring television provided by satellite, your service may be interrupted when heavy clouds and rain move in. A battery-powered

radio is preferred because it will continue to broadcast updates even if electricity fails. A weather radio with good batteries is the best choice. If you're at work or home, begin to review your action plan. If traveling by vehicle, consider stopping at a rest stop or town that has public facilities for shelter and wait until the storm has passed. Remember that stopping under an overpass isn't the safest option.

The average single thunderstorm will pass in 30 to 45 minutes. A line of thunderstorms will take significantly longer to pass if they are moving over your area. If in or on the water, head for shore and seek shelter. If a severe thunderstorm watch alert is issued, monitor your alert system or media more vigilantly and be prepared to move to a safe place within your home, office or shelter. A safe place is an interior room, closet or bathroom with no windows. The more walls between you and the building exterior, the safer you are. If a severe thunderstorm warning is issued, move to your safe place and wait there until the warning has expired.

Tornadoes

Responding to a tornado watch or warning is similar to that of

a severe thunderstorm. After all, it's an unusually giant, rotating thunderstorm that ushers in tornado activity. For protection against tornadoes, your safe place should be on the lowest level of whatever type of dwelling you are in. As soon as a tornado watch is issued, take pillows, quilts and blankets to your safe place. If you have bicycle or motorcycle helmets or sports protective headgear, take these items to your safe place. If a tornado warning is issued, go to your safe place and protect your head with a helmet or pillow. Roll up in blankets or quilts to protect your vital organs. You will know if a tornado is upon you by an unmistakable sound and vibration that has been described by survivors as the sound of a freight train coming through. Stay in your safe place until the warning has expired.

Flooding

Flooding may be a problem during the storm event and for days afterward, as water continues to drain into streams even after the rain has stopped. It's smart to monitor your specific area for flooding so you can ensure, as much as possible, a means of evacuation and not become trapped. If you do find yourself trapped, immediately call for assistance. Soon after water rises above the first level baseboards of a home or building, the electricity will go off. If flooding is imminent, make the decision to evacuate instead of waiting it out in a flooded building or home. Know in advance where you will evacuate to.

When driving in a flood area, never drive through flowing water that has risen above the road surface. Turn around and take a different route. It only takes 18 to 24 inches of flowing water to sweep an average-size car off the road and into the stream. Culverts and bridges may be washed out and camouflaged by the water. You could drive your vehicle right into the stream. Vehicles stall easily in floodwater and cause the driver and occupants to attempt self-evacuation, putting them in grave danger.

Also avoid walking through flooded areas. It only takes about six inches of flowing water to sweep a person off their feet, and a lot less for someone to drown. In addition, remember water is an excellent electrical conductor, so lightning and downed power lines are especially dangerous if you attempt to share the same water.

Conclusion

Natural disasters such as floods, fires, earthquakes, tornadoes and windstorms affect thousands of people every year. Don't wait until adverse weather strikes. Recognizing an impending hazard and knowing what to do to protect yourself and your Family will help you take effective steps to prepare beforehand.◀

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ARMY SAFE IS ARMY STRONG

FIGHTER Management

NAME WITHHELD BY REQUEST

Perhaps the greatest challenge for any commander during a combat deployment is developing a comprehensive resource management schedule that can support combat operations without burning out his or her personnel. The battlefield has no interruptions — thanks to technological advancements — and, whether day or night, we must always be prepared to fight. However, these continuous operations present a series of personnel management issues that must be addressed by every level of leadership.



The generally accepted rule is there are three standard shifts to accomplish 24-hour operations: day, night and quick-reaction force. One company should be responsible for only one shift, but working out a schedule with limited manpower is a daunting task and one solution doesn't fit all situations. Each airframe or vehicle has its own unique work environment, and commanders must tailor their rest program based on their aircraft's idiosyncrasies, not a generic fighter management plan developed at the Army Headquarters level.

Due to the unusual demands placed on our Soldiers in terms of hours worked, stress, family separation and countless other problems, it's of paramount importance commanders do all they can to establish a consistent and equitable work pattern when practical. A consistent work pattern offers security and mental stability for Soldiers, allowing them to organize their days and lives. We're all creatures of habit, and habit promotes safety and efficient production. This is a good thing.

A good commander will realize the issue of fighter management is at the heart of true leadership. One that neglects this subject or delegates it to someone else is shirking their responsibility. Anyone can mindlessly say, "Work until the regulation or SOP says you can't work anymore."

However, Leaders must remember this fight is a marathon, not a sprint.

Think of it in terms of engine temperature. Imagine an aircraft's engine temperature consistently operating in the yellow or red range. When your Soldiers are pushed beyond the limit every day, just like that engine, they'll fail. This failure will show in the form of safety breaches, operational errors and even suicides. Find the "green" and keep your Soldiers there with limited time in the yellow and red zones. Soldiers want to do the mission and they want to serve their country proudly; otherwise, they wouldn't have volunteered for duty. Give them a schedule that allows this to occur, not one that takes advantage of their patriotism.

Set yourself apart from other Leaders by carefully looking at everything you and your Soldiers are facing to determine the best crew endurance program for your team. Some obvious factors to evaluate include the environment, mission demands, equipment issues, personal affairs, support systems and culture. Remember, they're your team not the enemy, and the circle of support begins with you. Anyone can be put in charge, but not everyone can handle the responsibility correctly.

A Leader shows his or her concern (or lack thereof) for their Soldiers through a scheduling system. Morale will increase or decrease

proportionate to the level of thought revealed in a work schedule. A poor schedule results in low morale, but a good schedule will create positive workers that produce positive results. Positive attitudes create environments conducive to successful operations that, in turn, equal mission success. This success can be achieved through a good fighter management program.

Commanders are human resource managers, so know your Soldiers. The U.S. Army Aeromedical Research Laboratory has performed several studies regarding human biology and peak performance levels during the course of a day, including such variables as extreme heat and cold. The goal is to put our Soldiers in the fight when they're at their biological peak so they can perform at optimal levels. For aviators, this means ensuring they begin flight duties in the first third of their day, but no later than the second third. The same concept holds true for ground troops as well. They deserve to be put in the fight at their best.

Leaders have to know their Soldiers, and this personal knowledge is the key to an effective fighter management program. Talk to them and listen to their concerns. A conscientious work schedule will reap immeasurable rewards in terms of support and unit morale. Make it happen because it's worth the effort. Engaged Leaders save lives.◀

Forecast for Gro

RETIRED LT. COL. MITCHELL B. COHEN
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When the Mamas and the Papas sang, "It Never Rains in Southern California," they forgot to mention that sometimes it snows.

April in Iraq is hotter than hell's hinges, with daytime temperatures topping 120 F. I'd been there for 18 months when I got my chance in April 2009 to return stateside for 15 days of rest and recuperation leave. I was looking forward to enjoying a special vacation with my children. My plan was to pick them up in New Jersey, fly with them to Sacramento, Calif., and rent a red convertible Mustang. We would do some sightseeing and then drive down the California coast on U.S. Highway 1 to my best

friend's home in Palm Springs.

The trip got off to a good start with a day of sightseeing in San Francisco, followed by a good night's rest before heading to Yosemite National Park to see the redwoods and the Petrified Forest. What happened next, however, is a textbook example of bad planning or, as some would say, no planning at all.

When we got up the next morning and left San Francisco, it was raining and the temperature was 55 F. Two and a half hours later, as we climbed into the higher altitudes of the Sierra

foothills, the temperature dropped to 40 F. Inside the car, we barely noticed the falling rain. We were warm and happy, listening to music the kids had picked for the ride. I was thrilled to have made it home alive from Iraq. My children were elated; daddy was home safe and taking them on the trip of a lifetime.

At the base of Yosemite National Park, the temperature dropped to 32 F and the rain turned into snow. The fact that I was driving a convertible rear-wheel-drive Mustang failed to deter me from

TRIPS HELPS TRIPS

The author's experience is one you don't have to repeat. As a Soldier or Army Civilian, you have a tool to alert you to potentially threatening weather or road conditions. The Travel Risk Planning System, online at the U.S. Army Combat Readiness/Safety Center website at <https://safety.army.mil/>, gives you up-to-date information on weather and road conditions to help you avoid nasty surprises. As you go through your trip assessment, you'll be asked,

"Will you check the weather prior to your departure?" TRiPS makes it easy to do that by offering a button on the "Map and Go" page titled "Click Here For Weather And Road Conditions." There you'll be given the website for the National Oceanic and Atmospheric Administration along with websites for each state and even overseas locations such as Germany. Taking a few minutes to navigate these websites can put the "smooth" back into sailing for your vacation plans.

trouble

pushing onward and upward into the Sierra Nevada mountains. Ten miles into the park, we met a line of stopped cars in front of us. A four-wheel-drive Subaru had just slid off the narrow two-lane road, its front wheels coming to rest on the sturdy branches of a 200-year-old redwood tree, which, fortunately, kept it from sliding off the mountain. Just as we arrived at the scene, a tow truck led by a forest ranger arrived from the opposite direction. All traffic was at a standstill for the next two hours while the tow truck attempted to pull the Subaru to safety.

The bad news was I'd never considered the possibility of a snowstorm at the end of April. As a result, I didn't bother checking the weather before we departed from San Francisco or during our drive east into the mountains. Nor was I familiar with the California laws which mandated chains on tires in the Sierra Nevadas during snowstorms. As we waited for the tow truck to work its magic on the Subaru, the snow piled higher and higher on the road. Six inches of the slippery white stuff had accumulated. When we were finally cleared for departure, the roads were extremely dangerous, especially for a Mustang without snow tires or chains.

During the seven hours it took to get down the mountain to safer ground, the speedometer never exceeded 15 miles per hour. On some sharp turns where the drop-off was hundreds of feet, we crawled along at 5 mph because the driving conditions were so hazardous. All I could ask myself during this nightmare was, "Was this really what I intended?" The answer was, "Of course not!" However, my failure to check the weather before embarking on this adventure caused me to unintentionally place myself and my children in harm's way. Only through the grace of the good Lord were we able to make it out of Yosemite without incident.

That experience taught me a lesson. It makes a lot more sense — and saves a whole lot of time — if you check the weather rather than get stuck in it. After all, you've got better things to do with your vacation time, right?«



Training – It's better to calm down, slow down and collect your thoughts first.

Indiscipline – Do not give in to road rage and try to "get even" with another rider or motorist.

Proper planning – If you follow these tips, most likely you won't fall victim to road rage.

Safe driving – Don't lose your cool; continue on and enjoy the drive/ride.

**STOMP-ING
OUT ACCIDENTS
WITH TIPS**

SEDANS

TRUCKS

OFF-ROAD
VEHICLES

MOTORCYCLES

PEDESTRIANS

GRAB THE CAT AND RUN

MARY PROFITT
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Fort Detrick, Md.



I have never been fond of cooking ... or very good at it, for that matter. My expertise in the kitchen revolves around the use of a Fry Daddy and something in a bag from the “frozen foods” section of the supermarket, as was the case on the day of my cooking incident.

On this day, I decided to cook up my specialty — fried mushrooms straight from the freezer. The only problem was I did not have enough cooking oil to fill the Fry Daddy. I opted

instead to fill a shallow frying pan with the oil I had. This is the point where the clarity of hindsight would have been helpful.

It didn't seem like a bad idea at the time to heat the

oil to near boiling and then dump in a bag of frozen mushrooms encapsulated in a fuzzy coat of ice crystals. Hunger, and my inexperience in the kitchen, undoubtedly played a role



in my bad judgment.

Not surprisingly, when the frozen mushrooms hit the boiling oil, violent splashing caused the oil to spill outside the pan and onto the burner. A fire immediately erupted on the burner and in the frying pan. Instantly, my mind recalled the fire safety briefings I'd heard in grade school and the warning, "Remove from the source of

heat." I grabbed the pan by the handle and quickly tried to move it to another burner on the stovetop. In doing so, the fiery oil in the pan spilled across the entire range. I now faced a flaming sheet of cooking oil that was threatening to reach the exhaust hood almost two feet above!

I remembered you should never use water to extinguish a grease fire, but I

DID YOU KNOW?

According to the U.S. Fire Administration, the kitchen can be one of the most hazardous rooms in the house if you don't practice safe cooking behaviors. Whether you are cooking the family holiday dinner or a snack for the children, practicing safe cooking behaviors will help keep you and your family safe. Here are a few guidelines that may help prevent a kitchen mishap:

Watch What You Heat

- The leading cause of fires in the kitchen is unattended cooking. Stay in the kitchen when you are frying, grilling or broiling food. If you leave the kitchen for even a short period of time, turn off the stove.
- If you are simmering, baking, roasting or boiling food, check it regularly, remain in the home while food is cooking and use a timer to remind you that you're cooking.
- Stay alert! To prevent cooking fires, you have to be alert. You won't be if you are sleepy, have been drinking alcohol or have taken medicine that makes you drowsy.

Keep Items That Can Catch Fire and Heat Sources Apart

- Keep anything that can catch fire — potholders, oven mitts, wooden utensils, paper or plastic bags, food packaging, towels or curtains — away from your stovetop.
- Keep the stovetop, burners and oven clean.
- Keep pets off cooking surfaces and nearby countertops to prevent them from knocking things onto the burner.
- Wear short, close-fitting or tightly rolled sleeves when cooking. Loose clothing can dangle onto stove burners and catch fire if it comes into contact with a gas flame or electric burner.

For more information about cooking fire safety, visit the U.S. Fire Administration website at http://www.usfa.dhs.gov/citizens/home_fire_prev/.

“The experience was helpful in realizing **HOW A SIMPLE TASK** could turn into an **EXTREMELY DANGEROUS** situation in the blink of an eye.”

had no baking soda or flour available (what cooking-challenged 23-year-old has that sort of thing in the kitchen?). My mind was racing to find an alternative. Panicked and overwhelmed, my next thought was, “Grab the cat and run!” Then I had a “light-

bulb moment.” Of course ... the cat! I had an economy-sized bag of cat litter in the closet just feet away. It was my only option and, at this point, using cat litter as an extinguisher certainly couldn't make the situation any worse.

I ripped open the bag and dumped 30 pounds of litter onto the growing flames. It immediately extinguished a majority of the fire. I was able to smother what remained with a damp towel. After smoldering for hours, the mass of burnt litter began to cool

and I breathed a sigh of relief. I had saved the day and was feeling pretty darn

proud of myself. I realized, though, that I should have paid better attention while cooking and not added frozen mushrooms to boiling oil. Ice crystals and hot oil are a dangerous combination.

It took about a week to clean all the litter out of the range, and the exhaust hood has permanent stains that serve as a reminder of my kitchen mishap. I have not attempted to deep-fry anything since. The experience was helpful in realizing how a simple task could turn into an extremely dangerous situation in the blink of an eye. It also made me appreciate all those boring lessons on fire safety that really paid off in that moment when I had no time to think.◀



Family strong!



Family engagement kit

<https://safety.army.mil>

On the home front, a Soldier's "battle buddy" is often his or her Family. Check out the new Family Engagement Kit to learn how you can look out for the safety of your Soldier. The kit features a variety of tools, including videos, real-life stories, resources and tips to keep your Soldier safe.




**ARMY SAFE
IS ARMY STRONG**

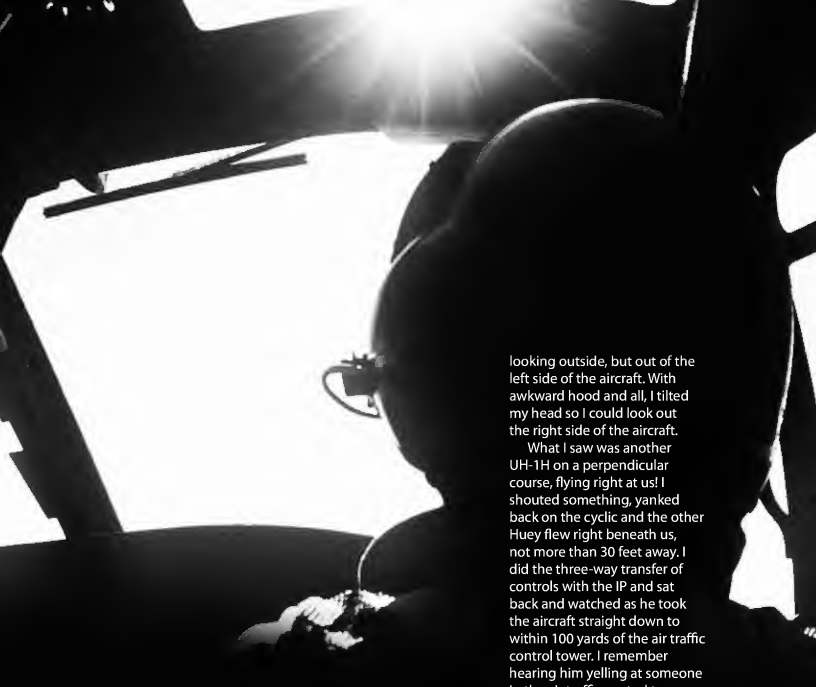


That Little Voice

DARRYL FLASPHALER
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Rock Island, Ill.



I was in the instrument phase of flight school at Fort Rucker, Ala., and returning to Cairns Army Airfield after a long day of training. My instructor pilot was a Vietnam veteran, an outstanding pilot who had probably 5,000 hours of flight time. It was a privilege to fly and learn from someone who possessed so much knowledge and skill. My IP was not one to waste Army time or money, so when we got close to the airfield, he had me tune in the AM nondirectional radio beacon frequency and told me to get under the hood and to initiate an NDB approach. I distinctly remember he received clearance from the tower to initiate the approach. Unfortunately for us, that clearance came from a student air traffic controller who probably was not adequately supervised.



I initiated the approach at 3,000 feet, set the descent at 500 feet per minute and the airspeed at 65 knots and was in the process of actually flying an acceptable instrument approach. Needless to say, I was excited and proud — and even my IP was impressed enough to offer me some sincere words of encouragement. After telling me I was doing great and to keep it up, he told me to just focus on the instruments and to not worry about anything outside; he had the outside. So, I

did what I was instructed to do.

Then, about a minute and a half into the approach, I experienced a compelling and completely overwhelming urge to look outside the right side of the aircraft. Being the conscientious student that I was, I tried hard to fight the urge, as I did not want to disappoint my IP by showing a complete lack of discipline and inability to follow instruction. But I simply could not conquer the urge to look up. When I did, I saw the IP

looking outside, but out of the left side of the aircraft. With awkward hood and all, I tilted my head so I could look out the right side of the aircraft.

What I saw was another UH-1H on a perpendicular course, flying right at us! I shouted something, yanked back on the cyclic and the other Huey flew right beneath us, not more than 30 feet away. I did the three-way transfer of controls with the IP and sat back and watched as he took the aircraft straight down to within 100 yards of the air traffic control tower. I remember hearing him yelling at someone in the air traffic control tower, even with my helmet still on.

I came away with many lessons learned when I graduated flight school in 1990. That particular day, on that particular flight, I learned if your mind is telling you to do something, it's best to listen and to follow your instincts. I realized much later that this flight had some residual effects on my desire and motivation to try to excel as an Army aviator. But to this day, I am thankful that I listened to that little voice in my ear.◀



AVIATION

AH-64D



CLASS A

- The crew experienced loss of tail rotor authority during flight, followed by low rotor RPM and generator loss. The aircraft contacted the ground with the left main landing gear and rolled onto its left side.

CLASS B

- The aircraft rotor system contacted a Persistent Ground Surveillance System tether during flight and landed without further incident. One main rotor blade tip cap was damaged and the aerostat was lost.

MH-6M



CLASS B

- The crew experienced debris in the main rotor system during fast-rope training and executed a forced landing. The aircraft touched down hard and sustained damage to the undercarriage, structure and MRB.

OH-58D(R)



CLASS A

- Four crewmembers died in an accident involving two OH-58D(R) aircraft during night vision goggle training missions.

CLASS C

- The aircraft experienced an engine overspeed condition during

FADEC manual training and landed without further incident.

- A round of a high-explosive rocket engagement resulted in three injuries to friendly forces.
- The engine experienced an overspeed condition during MOC run-up.

RC-12P



CLASS C

- The crew experienced a No. 2 engine surge and an overtorque reading during takeoff. The flight was aborted and the aircraft landed without further incident. Postflight inspection revealed damage to the propeller.

UAS



CLASS B

- The crew received an IG FAIL reading shortly after launch. The recovery chute was unable to be deployed. The UA descended to ground contact with damage and was recovered.

GROUND

ACV



CLASS B

- A Mine Resistant Ambush Protected vehicle was damaged when it caught fire while it was stopped due to a flat tire.

LOSSES AVIATION

ATTACK	2/0
RECON	1/4
UTILITY	3/1
CARGO	2/0
TRAINING	0/0
FIXED-WING	1/0
UAS	1/0

as of Mar. 6, 2012 **TOTAL 10/5**

Personnel Injury



CLASS A

- A local national citizen was killed and two others were injured when two 81 mm rounds impacted off target during a unit's howitzer/mortar registration.
- A Soldier presumably drowned after his body was discovered in a local creek. Prior to his discovery, the Soldier had been with fellow Soldiers.

LOSSES GROUND

AMV	6/3
ACV	3/1
PERSONNEL INJURY	9/9
FIRE/EXPLOSIVE	1/0
PROPERTY DAMAGE	0/0

as of Mar. 6, 2012 **TOTAL 19/13**

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, email safe.knowledge@conus.army.mil.

- A Soldier died after falling out of a unit run.
- A Soldier was killed when he discharged a round into his head from the personal handgun he was handling.

CLASS B

- A Soldier's finger had to be amputated after his ring got caught as he was exiting through the driver's hatch of a Stryker. The Soldier was not wearing protective gloves.
- A Soldier died after she lost control of her vehicle, crossed an interstate median and struck a tractor-trailer. The Soldier, who was unbelted, was ejected into the median.
- A Soldier was riding as the front-seat passenger in a vehicle when the driver lost control, went off the road and struck a tree. The Soldier was killed on impact, and the driver later died of her injuries. Both were wearing seat belts.
- A Soldier was killed when he lost control of his vehicle while driving in wet conditions on a winding road.

DRIVING

POV



CLASS A

- A Soldier was killed when his speeding vehicle left the road, overturned several times and caught fire.
- A Soldier died when he was thrown from his speeding vehicle after it left the road and overturned several times.
- A Soldier was killed when his vehicle struck the concrete base of an interstate overpass.
- A Soldier lost control of his vehicle on post, collided with oncoming traffic and then struck and killed a pedestrian.

CLASS C

- A Soldier was injured when his pickup slid off the road and into a snow bank.
- A Soldier was injured when his vehicle was struck at an intersection by a driver who had ignored a stop sign.
- A Soldier was injured when she swerved off the road to miss a deer, struck the curb and went into the woods.



POM



CLASS A

- A Soldier was killed when he veered into oncoming traffic and struck a tractor-trailer.

CORRECTION

TO MAKE A DIFFERENCE

A

In the article "To Make a Difference" in our February issue, a Soldier killed in a motorcycle accident was listed as assigned to the wrong unit. At the time of his death, the Soldier was assigned to C Troop, 38th Cavalry Regiment.

IS THE SAFETY



ON?

The Range & Weapons Safety Toolbox contains information, tools and links related to the safe handling of military and privately owned weapons.

RANGE & WEAPONS SAFETY TOOLBOX

<https://safety.army.mil/rangeweaponssafety>



ARMY SAFE
IS ARMY STRONG



TRAVEL RISK **TRiPS** PLANNING SYSTEM

<https://safety.army.mil>

Have you heard about the
new features on **TRiPS**?

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**ARMY SAFE
IS ARMY STRONG**

**A BAND OF BROTHERS
& SISTERS**